This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1-13. Cancelled

14. (Currently Amended) A mechanical and electrical connection system ~~joining ends of two approximately coaxial shafts movable along an overall axial direction and capable of transmitting approximately axial forces,~~ comprising:

a driving shaft connected to an axial translation device and having an end comprising an annular groove proximate to an axial end extension, the axial end extension ~~of~~ having a first axial height (H1);

a driven shaft approximately coaxial with the driving shaft, the driven shaft having an end comprising an annular groove proximate to an axial end extension, the axial end extension ~~of~~ having a second axial height (H2); and

a generally cylindrical coupling for connecting the ends, the coupling including:

a first annular shoulder with a surface having a shape complementary to the shape of the annular groove proximate to the axial end extension of the driving shaft without clearance;

a second annular shoulder with a surface having a shape that fits into ~~complementary to the shape of~~ the annular groove proximate to the axial end extension of the driven shaft, a radial clearance provided between the ~~complementary~~ surfaces of the second annular shoulder and the annular groove of the driven shaft; and

a cavity for receiving the axial end extensions of the shafts and having an axial height, the axial height of the cavity strictly greater than the sum of the first and second axial heights (H1) and (H2) of the axial end extensions,

the axial end extension of the driving shaft and the axial end extension of the driven shaft remaining in mechanical and electrical contact due to an elastic conducting means,

wherein the driving shaft and driven shaft are approximately coaxial shafts movable along an overall axial direction and capable of transmitting approximately axial forces.

15. (Previously Presented) The system according to claim 14, wherein the conducting means is a metallic helical spring.

16. (Currently Amended) The system according to claim 14, wherein the annular groove of the driving shaft includes two walls perpendicular to the axis of the driving shaft and separated by a distance of about a third axial height (H0), and a bottom comprising a cylindrical surface with a first diameter (C) coaxial with the axis of the driving shaft, and

wherein the first annular shoulder is also provided with two walls perpendicular to the axis of the coupling, the two walls separated by a distance of the third axial height (H0) - ε, where $0.05 \text{ mm} \leq \varepsilon \leq 0.2 \text{ mm}$, and a cylindrical wall having a second diameter (C) + ε', where $0.05 \text{ mm} \leq \varepsilon' \leq 0.2 \text{ mm}$.

17. (Currently Amended) The system according to claim 14, wherein the annular groove of the driven shaft includes two walls perpendicular to the axis of the driven shaft and separated by a distance of about a fourth axial height (H3), and a bottom in the form of a cylindrical surface with a third diameter (∅G) coaxial with the axis of the driven shaft, and wherein the second annular shoulder has ~~a complementary shape to the coupling including~~ two walls perpendicular to the axis of the coupling and separated by a fifth distance (H4) strictly less than the fourth axial height (H3), and a cylindrical wall with a diameter strictly greater than the third diameter (∅G) of the annular groove of the driven shaft.

18. (Currently Amended) The system according to claim 14, wherein there is a first radial clearance (J1) between an outer surface of the axial end extension of the driven shaft and the wall of the cavity formed in the coupling for holding the axial end extensions of the shafts.

19. (Currently Amended) The system according to claim 14, wherein the difference between the axial height of the cavity and the sum of the first and second axial heights (H1) and (H2) corresponds to a second maximum clearance (J2) between the shaft ends, and the

difference between the third axial height (H3) of the annular groove of the driven shaft and the fifth axial height (H4) of the second annular shoulder of the coupling corresponds to a third maximum clearance (J4) strictly greater than the second maximum clearance (J2) between the shaft ends.

20. (Currently Amended) The system according to claim 14, wherein the axial end extension of the driving shaft comprises a projection having an end with a ~~transverse~~ wall~~that occupies a convex surface of revolution about the axis of the driving shaft~~, the axial end extension of the driven shaft comprising a projection having an end with a ~~transverse~~ wall~~with a profile such that~~, wherein, when the two shafts are put into contact with each other, the area of contact between the projection of the driven shaft and the projection of the driving shaft is located as close as possible to the axis of the driving shaft.

21. (Currently Amended) The system according to claim 20, wherein the wall of the projection of the axial end extension of the driven shaft comprises a ~~projection having an end with a transverse wall that occupies a convex surface of revolution about the axis of the driven shaft, the~~ curvature at its mid-point greater than ~~the~~ a curvature of the ~~transverse~~ wall of the projection of the driving shaft.

22. (Currently Amended) The system according to claim 14, wherein the axial end extensions of each shaft include a base located between the annular groove and the projection of the shafts, the base and the projection arranged such that the elastic conducting means can bear on each of the shafts to provide continuous electrical contact respectively between the two shafts.

23. (Currently Amended) The system according to claim 14, wherein the axial end extension of the driving shaft comprises ~~an annular groove and an axial end extension adjacent one another, the~~ a cylindrical base ~~of the axial end extension~~ having a fourth diameter (ØE) greater than the diameter of the annular groove (C)~~, a transverse wall~~ and being formed to contact the first shoulder of the coupling, and

wherein the axial end extension of the driven shaft comprises ~~an annular groove and an axial end extension adjacent one another, the~~ a cylindrical base ~~of the axial end extension~~

having a fifth diameter (∅K) greater than the diameter of the annular groove (∅G)~~, a transverse wall~~ and being formed to contact the second shoulder of the coupling, the second shoulder separated from the first shoulder, the first and second shoulders defining the cavity within the coupling.

24. (Previously Presented) The system according to claim 14, wherein the coupling comprises two shells in the form of half cylinders comprising the first shoulder and the second shoulder on their respective inner faces, the two shells placed to have the first shoulder and the second shoulder facing the annular grooves in the driving shaft and the driven shaft and fixedly held by a cylindrical sleeve slid onto one end of one of the shafts.

25. (Previously Presented) The system according to claim 24, wherein the sleeve is fixed at one end using a shoulder that provides a stop for the shells and fixed at the other end by attachment means securing each shell to the sleeve.

26. (Previously Presented) The system according to claim 25, wherein the attachment means is one or more fasteners selected from the group consisting of a pin passing through the sleeve, a retaining ring, a nut, and a needle screw.

27. (Previously Presented) The system according to claim 14, wherein the end of the driven shaft contacts the end of the driving shaft.

28. (Previously Presented) The system according to claim 27, wherein the driving shaft is a rod of a pneumatic jack and the driven shaft is an extension rod supporting a chisel.